

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference Sg/scs 032615wo	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/013916	International filing date (day/month/year) 09 December 2003 (09.12.2003)	Priority date (day/month/year) 12 December 2002 (12.12.2002)
International Patent Classification (IPC) or national classification and IPC F04B 27/04		
Applicant	LEYBOLD VACUUM GMBH	

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 05 June 2004 (05.06.2004)	Date of completion of this report 29 October 2004 (29.10.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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International application No.

PCT/EP2003/013916

I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:

pages 1-18, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the claims:

pages 1-14, as originally filed

pages _____, as amended (together with any statement under Article 19)

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the drawings:

pages 1/5-5/5, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages _____ the claims, Nos. _____ the drawings, sheets/fig _____5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	13	YES
	Claims	1-12, 14	NO
Inventive step (IS)	Claims	13	YES
	Claims	1-12, 14	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:

D1: US-A-4 545 738 (YOUNG NIELS O) 8 October 1985
(1985-10-08)

D2: US-A-6 035 637 (BEALE WILLIAM T ET AL)
14 March 2000 (2000-03-14).

1. The present application does not comply with the requirements of PCT Article 33(1), because the subject matter of claim 1 is not novel within the meaning of PCT Article 33(2).

Document D1 discloses a

piston compressor comprising a piston which reciprocates in a cylinder and which, in a filling position, compresses gas in a cylinder compression chamber,

gas bearing nozzles for gas bearing of the piston which are arranged in the piston region,

a compressed gas reservoir which is connected to the gas bearing nozzles,

a compressed gas supply line between the cylinder compression chamber and the compressed gas reservoir, and

an inlet valve which is provided in the course of the compressed gas supply line and is open in the filling position of the piston,

the inlet valve being formed by a cylinder wall opening and a piston wall opening which, in the filling position of the piston, are in mutually opposed positions and form an open valve and, in a non-filling position, are closed by the piston wall and the cylinder wall, respectively, and form a closed valve (see document D1 and the corresponding passages cited in the search report).

2. Document D2, considered independently of D1, also discloses a compressor in which the inlet valve is formed by a cylinder wall opening and a piston wall opening which, in the filling position of the piston, are in mutually opposed positions and form an open valve and, in a non-filling position, are closed by the piston wall and the cylinder wall, respectively, and form a closed valve (cf. D2 and the corresponding passages cited in the search report).

The subject matter of claim 1 is therefore also not novel in relation to document D2.

3. Dependent claims 2-12 and 14 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty or inventive step.

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4. The combination of features in dependent claim 13 is neither known from, nor suggested by, the available prior art.